M/041/008

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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November 1, 1995

TO: Minerals File

FROM: Lynn Kunzler, Reclamation Specialist

RE: Site Inspection, U. S. Gypsum, Jumbo Jensen Quarry, M/041/008, Sevier County, Utah

Date of Inspection: September 14, 1995
Time of Inspection: 10:00 a.m.
Conditions: Clear and warm
Participants: B. T. Webster, and George Mynar, U. S. Gypsum; Lynn Kunzler, DOGM

Purpose of Inspection: To evaluate status of past reclamation.

Mr. Webster indicated he was transferred to the Jumbo Jensen quarry in May, 1995, as the general quarry manager. He realized that over the last few years, paper work and/or reclamation had not proceeded to keep up with the reclamation plan. He requested this inspection to go over what reclamation had been done in the past and to go over current reclamation plans that the company will be implementing this fall. According to Mr. Webster, their records indicate that none of the reclamation has ever been released from bond.

We talked briefly about the bond and it was pointed out that if he did not want the bond released, that acreage or the money involved from the release of certain areas could be applied towards pit development in other areas. He indicated that is probably what he would do. They hope to open up a 3 -5 acre pit in the Jumbo area and depending on the size as to how much bond could be released to cover that disturbance.

B. T. provided me with a list of various pit sites. We proceeded to look at these pit sites. Many of them had been seeded prior to 1991 and timewise, these would be eligible for release. The mining plan showed vegetation cover in the area was 5% on hill sites and 10% on the more level areas. The reclamation standard would be 70% of these values. However, as we looked at the sites, there were areas where the vegetation cover in the surrounding areas was approaching 25-30% cover.

During early reclamation efforts, slope areas had been graded table-top smooth and, as a result, most of the precipitation and they think the seed as well, washed off the hill sites. These sites had very poor revegetation, with some larger tracks of ½ acre or larger where there was virtually no vegetation; just an occasional mustard or halogeton plant. B.T. agreed to rip these areas on the contour and reseed them this fall. Some of these areas have already been seeded twice, and after ripping on the contour and seeding a third time, I would suggest that we look at perhaps giving a variance, if the success standard is not achieved.

On the more flat areas and on the later reclamation done in 1990 and 1991, they had been instructed to leave the surface in a more roughened condition. In these areas, reclamation has been much more successful. In some areas, cover was exceeding 30%, mostly from shadscale and four-wing saltbush. Their revegetation seed mix, that had been approved back in the 1980's, included only five species: sagebrush, crested wheatgrass, indian ricegrass, shadscale and four-wing saltbush. All five of these species were observed at different levels on the reclamation areas. I indicated to B.T. that I would look at the revegetation potential and suggest a couple of other species, once I get back to the office and look at my reference books. There are areas on the site where there is a high salt content. We need to look at some different species that would have a high salt tolerance.

In several areas they were currently knocking down the highwall in preparation for reclamation. The regrading on all sites, other than the initial one where things were left smooth, was sufficient. Occasionally they would leave a small rocky knob or point. These sites blended in well with the surrounding topography and were being used by various forms of wildlife.

According to U.S. Gypsum records, 15.3 acres have been reclaimed in the past and are ready for bond release. They have plans to regrade and reseed approximately 20 acres this fall. Once they complete the regrading they could get a partial release for the regrading work and only hold back a sufficient amount for reseeding. They indicated their reseeding program included broadcasting the seed on the regraded surfaces and then covering the seed by dragging a harrow over the area.

They also applied 200 lb/acre of diamonium phosphate fertilizer; possibly at that level, they are burning the vegetation. I suggested that they cut the fertilizer rate in half in hopes of getting a little bit better reclamation.

B.T. indicated they were looking at the potential of buying a chipper/shredder. They get a considerable volume of old pallets; he wondered if it would be acceptable to chip and shred those pallets and use that as a mulch on the reclaimed areas. I indicated it would be acceptable to do that, but that he would possibly have to increase his nitrogen fertilizer. We would have to look at the carbon nitrogen balance to determine the rate. I suggested that he compost the chipped and shredded pallets for a year or two before he used them.

The last area we briefly looked at is down by the plant. They have an area where, over the years, they had been piling a considerable amount of waste wallboard and debris from the plant. This area has been covered with topsoil; Mr. Webster asked for assistance in putting together a seed mix to reseed this particular area. The area is adjacent to the river and is frequented by various waterfowl and wildlife. He would like a seed mix that would provide some forage or cover values for the waterfowl itself. I also suggested that planting some cottonwood trees along the river would also help screen this area from the public driving by.

B.T. suggested and requested that the Division come by and take a brief look at his operations once or twice a year. His own philosophy is to work with the regulators and would like to see us a little bit more often than what we have been coming in the past. I indicated that our goal is to inspect the sites like his at least once a year.

jb
cc: B.T. Webster, U.S. Gypsum
M041008.ins

Recommended Changes to Seed Mix
U.S. Gypsum Company
Jumbo/Jensen Quarry
M/041/008
November 1, 1995

Changes to seed mix:

Delete sagebrush
Reduce rate for Crested Wheatgrass by one-half

Add:

Forage kochia - (Kochia prostrata) at .5 lbs PLS/acre
Newhy grass - (Agropyron repens X A. smithii) at 2.0 lbs PLS/ac.
Tall wheatgrass - (Agropyron elongatum) at 2.0 lbs PLS/ac.
Boizoiski russian wildrye - (Elymus junceous) at 2.0 lbs/ac.

Rates are Pure Live Seed (PLS) for broadcast seeding methods. Reduce rate of grass species by ½ if drill seeded.

Seed mix for area by river:

SPECIES	*RATE*
Forage kochia - (Kochia prostrata)	0.75 lbs PLS/acre
Newhy grass - (Agropyron repens X A. smithii)	3.0
Tall wheatgrass - (Agropyron elongatum)	2.5
Alta fescue - (Festuca arundinacea)	2.0
Boizoiski russian wildrye - (Elymus junceous)	2.5 lbs/ac.

Rates are Pure Live Seed (PLS) for broadcast seeding methods. Reduce rate of grass species by ½ if drill seeded.